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ABSTRACT

This report examines patterns of poverty using seven different measures: average monthly poverty, episodic poverty, chronic poverty, annual poverty, poverty spells, poverty entry rates, and poverty exit rates. Data come from the 1996 panel of the Survey of Income and Program Participation (SIPP) and reflect the dynamics of poverty from 1996-1999. Unlike the Current Population Survey, which povides poverty estimates in a given year, the SIPP uses monthly data to measure poverty; this allows researchers to calculate short-term poverty rates and poverty rates over longer periods of time. Nearly 41 million people were poor in a given month in 1996, representing an average monthly poverty rate of 15.5 percent. By 1999, the rate was 34.8 million. About 34 percent of people were poor for at least 2 months, but only 2.0 percent were poor every month. More people exited than entered poverty from 1996-1999. Of those who were poor in 1996, 65.1 percent remained poor in 1997, 55.5 percent in 1998, and 50.5 percent in 1999. Non-Hispanic whites had lower poverty rates, shorter median poverty spells, lower poverty entry rates, and higher poverty exit rates than blacks and Hispanics. Patterns for Blacks and Hispanics were similar. Children tended to have higher poverty rates than adults. People in married couple families tended to have lower poverty rates than people in other family types. People in suburbs had lower poverty rates than people in central cities or nonmetropolitan areas. (Contains 11 figures.) (SM)

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Dynamics of Economic Well-Being: Poverty 1996-1999

Issued July 2003

Household Economic Studies

P70-91

Current Population Reports

By
John Iceland

Most poverty data come from studies conducted at one point in time, or from annual studies conducted on a different set of people every year. In the 1970s and 1980s, when researchers began analyzing information from longitudinal studies, a dynamic view of poverty began to emerge. The longitudinal data (collected from the same set of people for several years) show that a majority of poor individuals do not remain poor for very long periods of time and a relatively high proportion of people have experienced poverty at one point or another. Poverty is

Text Box 1. How Do We Measure Poverty?

Average monthly poverty	Average percent of people poor per month in each of the 4 years (1996-1999).
Episodic poverty	Percent of people who were poor in 2 or more consecutive months in a given time period.
Chronic or long-term poverty	Poor every month from 1996 through the end of 1999.
Annual poverty	Percent of people who are poor in a calendar year. Calculated using the sum of family income over the year divided by the sum of poverty thresholds that can change from month to month if one's family composition changes.
Spells	Number of months in poverty (excluding spells underway in the first interview month of the panel). Minimum spell length is 2 months. Spells are separated by 2 or more months of not being poor. Individuals can have more than one spell.
Entries	Not poor in 1996 but poor in a subsequent year. Uses an annual poverty measure.
Exits	Poor in 1996 but not poor in a subsequent year. Uses an annual poverty measure.
Annual official poverty measure in the Current Population Survey (CPS) (listed here for purposes of comparison).	Poverty thresholds are based on family composition in the interview month (which occurs in either February, March, or April), while income is based on reported annual income in the previous calendar year. CPS collects only annual—not monthly—income.

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Demographic Programs

UD 035 868

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chronic for a small but significant proportion of the poverty population.[1]

This report describes patterns of poverty using measures with different time horizons and provides a dynamic view of the duration of poverty spells and the frequency of transitions into and out of poverty. It further examines how poverty dynamics vary across demographic groups. Data for this analysis were collected in the 1996 panel of the Survey of Income and Program Participation (SIPP), the latest completed panel of the SIPP,[2] and reflect the dynamics of poverty from January 1996 to December 1999.[3] The population represented is the civilian noninstitutionalized population of the United States. The official source of annual federal poverty statistics is the Current Population Survey (CPS), which provides data for poverty estimates in a given year. Unlike the CPS, the SIPP uses monthly data to measure poverty, which allows one to calculate both monthly poverty rates and poverty rates over longer periods of time.

This report examines poverty using seven different measures: average monthly poverty, episodic poverty, chronic poverty, annual poverty, poverty spells, poverty entry rates, and poverty exit rates. The first text box gives a brief description of each of these measures.

HIGHLIGHTS[4]

- On average, nearly 40.9 (±0.7) million people were poor in a given month in 1996, representing an average monthly poverty rate of 15.5 (±0.3) percent. By 1999, the number of people who were poor fell to 34.8 (±0.8) million, indicating an average monthly poverty rate of 12.8 (±0.3) percent in that year.
- About 34.2 (±0.4) percent of people were poor for at least 2 months during the panel, but only 2.0 (±0.1) percent were poor every month of the 4-year period between 1996 and 1999.
- Reflecting declines in poverty from 1996 and 1999, more people exited poverty (14.8 (±0.5) million) over that time than entered poverty (7.6 (±0.4) million)—as measured by examining people's poverty status in those 2 years using annual income and poverty thresholds.
- Of those who were poor in 1996 (using an annual poverty measure), 65.1 (±1.2) percent remained poor in 1997, 55.5 (±1.3) percent were poor in 1998, and 50.5 (±1.3) percent were poor in 1999. Of those who were not poor in 1996, only 2.9 (±0.2) percent became poor in 1997, 3.3 (±0.2) percent were poor in 1998, and 3.5 (±0.2) percent were poor in 1999.[5]
- Poverty transitions occur more frequently when using a monthly rather than an annual poverty measure, indicating greater short-term fluctuations in income. Based on a monthly poverty measure (and excluding spells underway in the first interview month of the panel), 51.1 (±0.7) percent of poverty spells were over within 4 months, and about four-fifths were over after a year.
- Non-Hispanic Whites had lower poverty rates (measured using a variety of time frames), shorter median spell lengths, lower poverty entry rates, and higher poverty exit rates than Blacks and Hispanics.[6] Patterns for Blacks and Hispanics were generally similar; Blacks showed a higher prevalence of poverty along a couple of measures (median spell length and poverty entry rate), lower according

[1] Examples of previous longitudinal studies on poverty include: Mary Naifeh, "Dynamics of Economic Well-Being, Poverty, 1993-94: Trap Door? Revolving Door? Or Both?" Current Population Reports, Series P70-63 (Washington, DC: U.S. Government Printing Office, 1998). Signe-Mary McKernan and Caroline Ratcliffe, "Transition Events in the Dynamics of Poverty," Urban Institute Research Report, September 2002, *www.urban.org/url.cfm?ID=410575*. Mary Jo Bane and David Ellwood, "Slipping Into and Out of Poverty: The Dynamics of Spells," *Journal of Human Resources* 21 (1986), 1-23. Ann Huff Stevens, "The Dynamics of Poverty Spells: Updating Bane and Ellwood," AEA Papers and Proceedings 84, 2 (1994), 34-37. Ann Huff Stevens, "Climbing Out of Poverty, Falling Back In: Measuring the Persistence of Poverty Over Multiple Spells," *Journal of Human Resources* 34, 3 (1999), 557-88.

[2] The 2001 SIPP panel, a 3-year panel, collects monthly data from February 2001 through January 2004.

[3] The longitudinal estimates presented here are based on people who were interviewed in all waves of the reference period, or for whom imputed information exists. Efforts were made during the life of the panel to ensure that the sample remained representative of the noninstitutional population of the United States. People who moved were followed to their new address. If the people included in the estimates have different experiences of poverty than the people who did not respond initially, left the sample, or missed two or more consecutive waves, these longitudinal estimates may be biased. The panel consists of four rotations interviewed in consecutive months. For rotations with missing data at the beginning of 1996 or end of 1999, imputations were made on the basis of the closest month of data available. Rotation 3 had 1 month of data imputed in 1996, rotation 4 had 2 months imputed in that year, and rotation 1 had 1 month of imputed data in 1999.

[4] The estimates in this report are based on responses from a sample of the population. As with all surveys, estimates may vary from the actual values because of sampling variation or other factors. All comparisons made in this report have undergone statistical testing and are significant at the 90-percent confidence level unless otherwise noted. The figures in parentheses denote the 90-percent confidence intervals.

[5] The percent of people who exited poverty in 1998 was not significantly different from the percent who exited in 1999.

[6] Because Hispanics may be of any race, data in this report for Hispanics overlap slightly with data for the Black population. Based on data in the 1996 SIPP panel and using the panel weight, 3.5 percent of the Black population was of Hispanic origin. Data for Asians and Pacific Islanders and American Indians and Alaska Natives are not shown in this report because of their small sample sizes.

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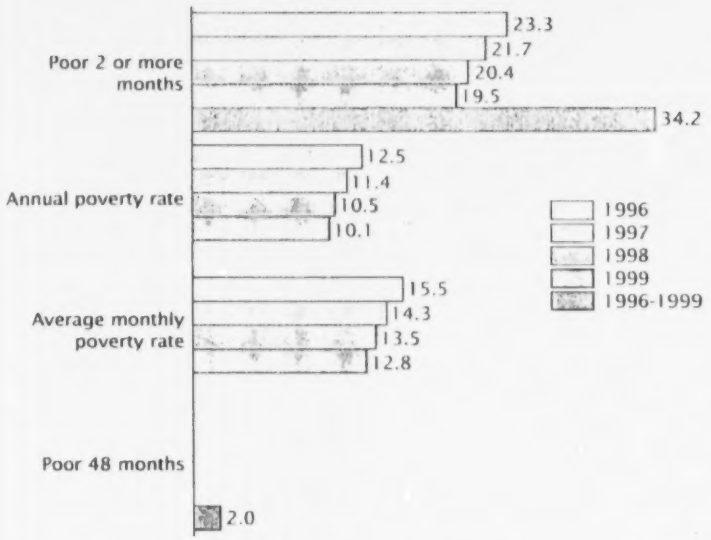
Figure 1.
Selected Poverty Rates: 1996-1999
(Percent poor)



Source: U.S. Census Bureau, 1996 Survey of Income and Program Participation.

to one (episodic poverty), and were not different from Hispanics among yet others (average monthly poverty, chronic poverty, and poverty exit rate).

- Children tended to have higher poverty rates than adults 18 to 64 and people 65 and over. There were two exceptions: people 65 and over had higher chronic poverty rates (poor for the entire panel) and lower exit rates than the other two age groups, likely indicating less variability in their income over the panel.
- People in married-couple families tended to have lower poverty rates than people in other family types. Conversely, people in families with a female householder were more likely to be poor than others along all measures.

Text Box 2. Average Monthly Poverty Rate: What Is It? Why Is It Higher Than the Annual Rate?

	Average Monthly Poverty	Annual Poverty
How is it computed?	For each person, family income in a given month is compared to the poverty threshold for the family composition in that month. The average monthly poverty rate in a given year represents the percent all of the months in a year in which people are poor.	For each person, the sum of family income over the year is compared to the sum of poverty thresholds. These thresholds may change from month to month if family composition changes.
How do they differ?	Computes poverty for each month. A person can be poor in some months and not poor in other months.	Computes poverty status using summed annual information. A person is poor for the year if annual income is less than the annual poverty threshold.
Why is the average monthly poverty rate higher than the annual poverty rate for a given year?	People are more likely to experience short-term (monthly) shortfalls in income than longer-term (annual) ones. Thus, people who are poor for a few months of the year will increase the average monthly poverty rate.	This is an all or none measure. Even if a person is poor for a few months of the year (when using the monthly measure), if his or her annual family income is higher than the corresponding annual poverty threshold then the person is counted as not poor. People often make up periodic (monthly) shortfalls in income with higher income in other months of the year.

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- People in suburbs had lower poverty rates than people in central cities or in nonmetropolitan territory across nearly all measures.

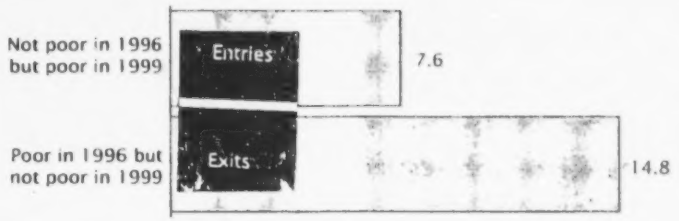
RESULTS

About 34.2 percent of the U.S. population was poor for at least 2 months during the 4-year period, but only 2.0 percent were poor continuously for a period of 48 months. Annual and average monthly poverty rates declined from 1996 to 1999.

Figure 1 shows poverty rates for the U.S. population from 1996 through 1999 using a variety of measures. While the average monthly poverty rate was 15.5 percent (representing 40.9 million people) in 1996, it dropped to 12.8 percent (or 34.8 million people) by 1999. Annual poverty rates also showed a decline over the period, from 12.5 percent in 1996 to 10.1 percent in 1999. Text box 2 explains why average monthly poverty rates differ from annual ones.

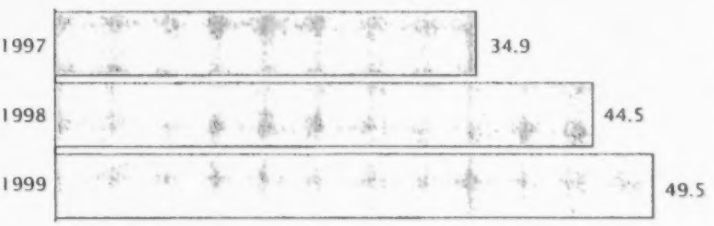
Also reflecting declines in poverty over the 4-year period, Figure 2 indicates that fewer people entered poverty than exited poverty. There were 7.6 million people who were not poor in 1996 (using an annual measure of poverty) who were poor in 1999. In contrast, 14.8 million people who were poor in 1996 were no longer poor by 1999. About 4.9 million people were poor for all 48 months of the panel. This last value represents 2.0 percent of the overall population, but 5.8 percent of those who were ever poor (for at least 2 months) during the panel.

Figure 2.
Number of People Entering and Exiting Poverty: 1996 and 1999
(Number in millions)



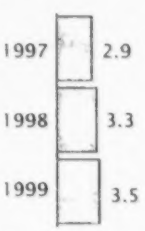
Source: U.S. Census Bureau, 1996 Survey of Income and Program Participation.

Figure 3.
Poverty Exits
Percent of People Who Were Poor in 1996 But Not Poor in 1997, 1998, or 1999
(Percent exiting poverty based on an annual poverty measure)



Source: U.S. Census Bureau, 1996 Survey of Income and Program Participation.

Figure 4.
Poverty Entries
Percent of People Who Were Not Poor in 1996 But Poor in 1997, 1998, or 1999
(Percent entering poverty based on an annual poverty measure)



Source: U.S. Census Bureau, 1996 Survey of Income and Program Participation.

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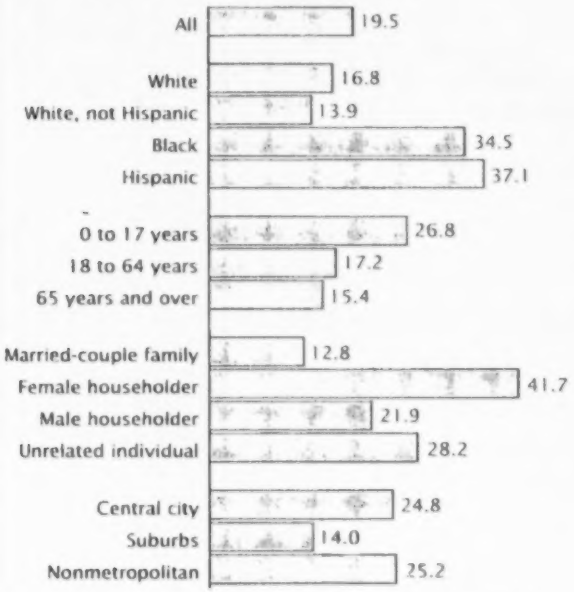
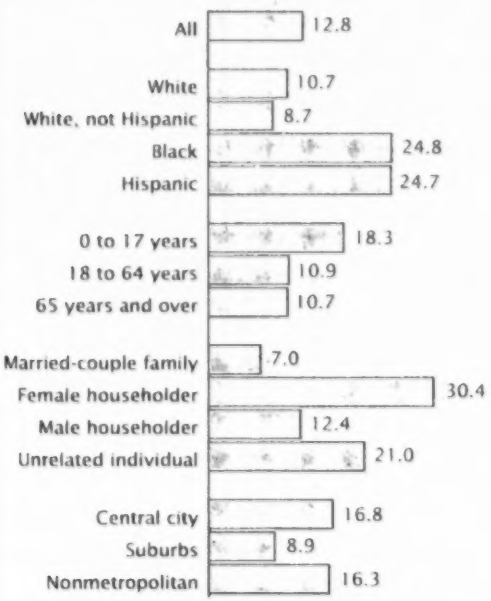
Figure 5.
Episodic Poverty Rates: 1999
(Percent of people poor at least 2 months)



Source: U.S. Census Bureau, 1996 Survey of Income and Program Participation.

Figure 6.
Average Monthly Poverty Rates: 1999
(Percent poor)



Source: U.S. Census Bureau, 1996 Survey of Income and Program Participation.

Figure 3 indicates that of those who were poor in 1996, 34.9 percent had exited poverty in 1997 (using an annual measure of poverty). Conversely, this means that 65.1 percent of those who were poor in 1996 remained poor in 1997. Over time, the percent of those poor in the initial year who were not poor in subsequent years increased—44.5 percent were not poor in 1998 and 49.5 percent were not poor in 1999. So half of those who were poor in 1996 were poor 3 years later, in 1999 (some of those people may not have been poor at some point in the intervening years). Figure 4 shows that only a very small proportion of the nonpoor population in 1996 became poor in subsequent years, indicating that entries into poverty are relatively rare when using an annual poverty measure.[1]

Episodic, monthly, and chronic poverty rates varied across demographic groups.

Figure 5 shows episodic poverty rates (where people are poor for at least 2 months), Figure 6 shows average monthly poverty rates in 1999, and Figure 7 shows the percent of people who were poor every month of 1996 through 1999, by family status, age, race and Hispanic origin, and residential location. Across all these poverty measures, non-Hispanic Whites had lower poverty rates than both Blacks and Hispanics. Hispanics had higher episodic poverty rates than Blacks, though their average monthly and chronic poverty rates were not statistically different.

[1] Since the number of people who are not poor is much larger than the number who are poor, the base or denominator for entries into poverty is larger than the one for exits. As a result, even if the number of people who entered poverty were the same as the number who exited, entry rates would be much lower than exit rates.

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Children had higher monthly and episodic rates than adults 18 to 64 and those 65 and over, though the people 65 and over had the highest chronic poverty rates (being poor for the whole panel).

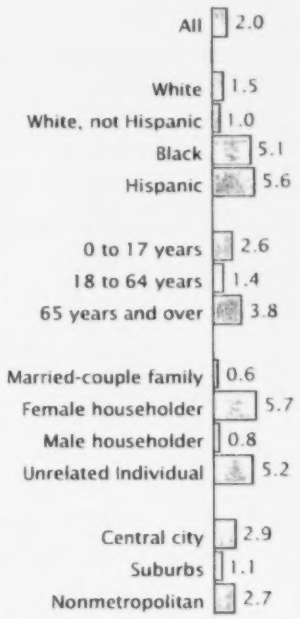
People in married-couple families had lower poverty rates than overall averages across the three poverty measures, while people in female-householder families and unrelated individuals had higher poverty rates than average. People in the suburbs had lower poverty rates than those living in central cities and nonmetropolitan territory.

Poverty spells measured on a monthly basis tended to be short in duration—about half were over after 4 months.

Figure 8 shows the duration of poverty spells in the 1996 SIPP panel. It should be noted that these results are based on an analysis of spells, while other statistics in this report are analyses of individuals. People can have more than one spell. These calculations exclude poverty spells underway during the first interview month of the SIPP survey, as the actual starting point of these spells is unknown.[8] Figure 8 indicates that a little over half of the poverty spells, measured by using monthly income and poverty thresholds, were completed after 4 months. Another 19.3 percent of spells were over after 8 months. After

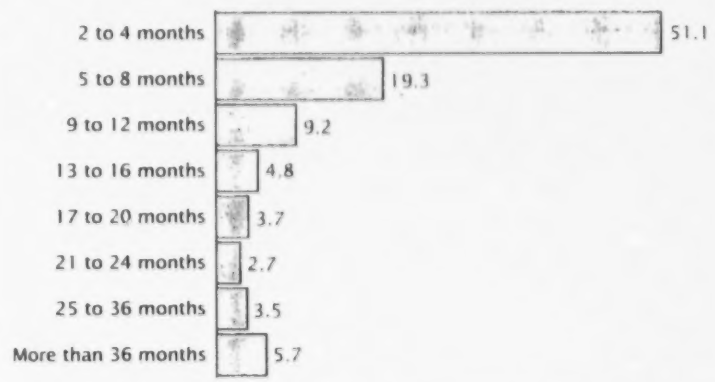
[8] About 30 percent of poverty spells began in or before the first interview month. For spells still underway in the last month of the SIPP panel, well-established statistical methods involving survival analysis were used to produce an estimate of the distribution of eventual spell lengths. See, for example, Paul D. Allison, *Survival Analysis Using the SAS System: A Practical Guide*. Cary, NC: SAS Institute Inc., 1995.

Figure 7.
Chronic Poverty Rates: 1996-1999
(Percent poor all 48 months)



Source: U.S. Census Bureau, 1996 Survey of Income and Program Participation.

Figure 8.
Duration of Poverty Spells: 1996-1999
(Percent. Excludes spells underway during the first interview month)


2 to 4 months 51.1
5 to 8 months 19.3
9 to 12 months 9.2
13 to 16 months 4.8
17 to 20 months 3.7
21 to 24 months 2.7
25 to 36 months 3.5
More than 36 months 5.7

Source: U.S. Census Bureau, 1996 Survey of Income and Program Participation.

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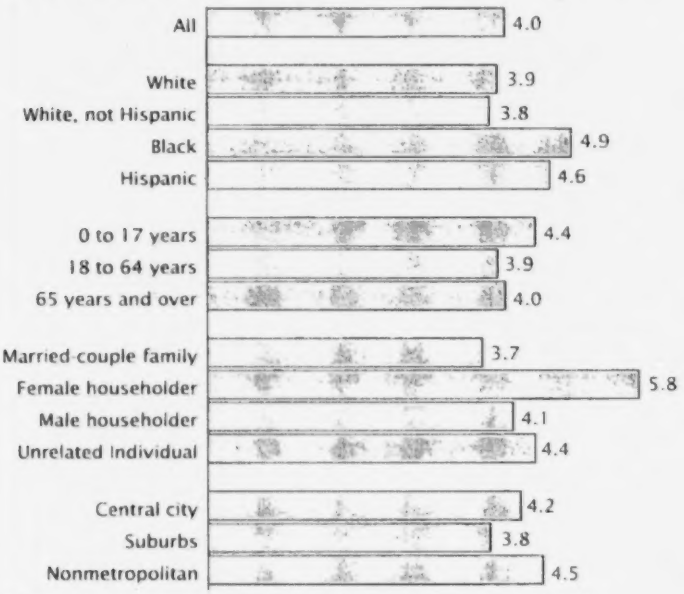
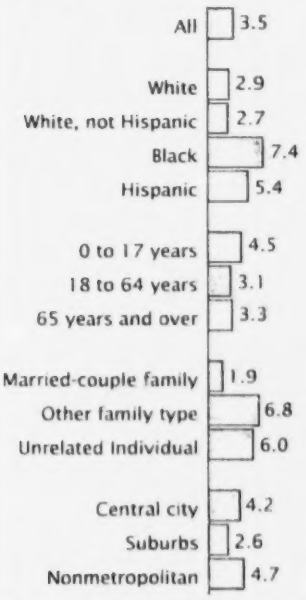
Figure 9.
Median Poverty Spells: 1996-1999
(Months. Excludes spells underway during the first interview month)



Source: U.S. Census Bureau, 1996 Survey of Income and Program Participation.

Figure 10.
Percent of the Nonpoor in 1996 Who Were Poor in 1999
(Entry rates in percent)



Note: Poverty status calculated using annual income and thresholds.
Source: U.S. Census Bureau, 1996 Survey of Income and Program Participation.

1 year, about four-fifths (79.6 percent) of monthly poverty spells were complete. About 5.7 percent of the spells lasted more than 36 months.[9]

Figure 9 shows median poverty spell lengths for various demographic groups, again using monthly data over the 1996 to 1999 period. The overall median spell length was 4.0 months.[10] The median spell lengths were longer for Blacks (4.9 months) and Hispanics (4.6 months) than for non-Hispanic Whites (3.8 months). Median spell lengths were longer for children (4.4 months) than for people 18-64 (3.9 months) and 65 and over (4.0 months). People living in families with a female householder had longer median spell lengths than those for other family types.

Poverty entry and exit rates varied across demographic groups.

Figures 10 and 11 show poverty entry and exit rates, using a measure based on annual income and poverty thresholds (rather than monthly information) and data from 1996 and 1999. Overall, only 3.5 percent of the nonpoor population in 1996 had become poor in 1999. A lower proportion of nonpoor non-Hispanic Whites in 1996 were poor in 1999 (2.7 percent)

[9] If spells underway in the first interview month (i.e., left-censored spells) are not excluded from the analysis, and it is assumed that such spells started in the first interview month, then estimated spell durations are longer: 43.4 percent of poverty spells were over after 4 months, 72.4 percent were over after a year, and 10.8 percent lasted more than 36 months.

[10] If no spells are excluded from the analysis, and it is assumed that spells underway in the first month of the SIPP panel started in that month, the median spell length is 5.2 months instead of 4.0 months. This indicates that poverty spells where the beginning is not observed tended to be longer than those that began after the start of the panel.

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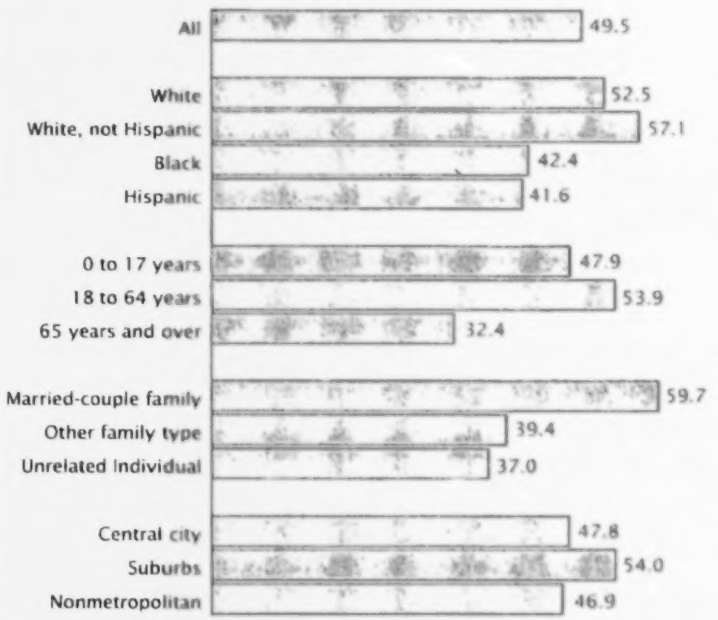
than Blacks (7.4 percent) or Hispanics (5.4 percent).

Children had higher entry rates (4.5 percent) than people 18 to 64 (3.1 percent) or 65 and over (3.3 percent), though there was no significant difference between the latter two age groups. People in married-couple families had lower entry rates (1.9 percent) than people in other family types (6.8 percent) or unrelated individuals (6.0 percent), whose rates did not significantly differ.[11] Finally, those living in the suburbs had lower entry rates (2.6 percent) than those in central cities (4.2 percent) or nonmetropolitan territory (4.7 percent), who had similar rates as well.

Figure 11, which focuses on exit rates using an annual poverty measure, shows that half of those who were poor in 1996 were not poor in 1999. The exit rates for Blacks (42.4 percent) and Hispanics (41.6 percent), while not significantly different from each other, were lower than that for non-Hispanic Whites (57.1 percent). The patterns by age differ a little when looking at exit rates rather than entry rates. When examining exits, the elderly who were poor in 1996 were less likely to be not poor in 1999 than children or adults 18 to 64. This pattern is consistent with the relatively high rates of chronic poverty (poor for all 48 months) among people 65 and over, shown in Figure 7. Incomes for the 65-and-over population may vary less than those of other groups.

Exit rates were considerably higher for people in married-couple families (59.7 percent) than those in other family types (39.4 percent) or unrelated individuals (37.0 percent), though the rates between the latter two did not significantly differ. Exit rates were a little higher in the suburbs than in central cities or nonmetropolitan territory; there was no significant difference between the latter two.

Figure 11.
Percent of the Poor in 1996 Who Were Not Poor in 1999
(Exit rates in percent)



Note: Poverty status calculated using annual income and thresholds.
Source: U.S. Census Bureau, 1996 Survey of Income and Program Participation.

SOURCE OF THE DATA

The population represented (the population universe) in the 1996 Survey of Income and Program Participation (SIPP) is the civilian noninstitutionalized population of the United States. The SIPP is conducted at 4-month intervals. The data in this report refer to the period from January 1996 through December 1999. The institutionalized population, which is excluded from the population universe, is composed primarily of the population in correctional institutions and nursing homes (91 percent of the 4.1 million institutionalized population in Census 2000).

ACCURACY OF THE ESTIMATES

Statistics from surveys are subject to sampling and nonsampling error. All comparisons presented in this report have taken sampling error into account and are significant at the 90-percent confidence level. This means the 90-percent confidence interval for the difference between the estimates being compared does not include zero. Nonsampling errors in surveys may be attributed to a variety of sources, such as how the survey was designed, how respondents interpret questions, how able and willing respondents are to provide correct answers, and how

[11] Exits and entries into poverty by family status are reported for people whose family status was unchanged throughout the panel.

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accurately the answers are coded and classified. The Census Bureau employs quality control procedures throughout the production process including the overall design of surveys, the wording of questions, review of the work of interviewers and coders, and statistical review of reports to minimize these errors.

The Survey of Income and Program Participation weighting procedure uses ratio estimation, whereby sample estimates are adjusted to independent estimates of the national population by age, race, sex, and Hispanic origin. This weighting partially corrects for bias due to undercoverage, but biases may still be present when people who are missed by the survey differ from those interviewed in ways other than the age, race, sex, and Hispanic origin. How this weighting procedure affects other variables in the survey is not precisely known. All of these considerations affect comparisons across different surveys or data sources.

For further information on the source of the data and accuracy of the estimates including standard errors and confidence intervals, go to *www.sipp.census.gov/sipp/sourceac/s&a96_040501.pdf* or contact Timothy Stewart of the Census Bureau's Demographic Statistical Methods Division on the Internet at *Timothy.D.Stewart@census.gov*

MORE INFORMATION

The report is available on the Internet (www.census.gov); search for poverty data by clicking on the 'Subjects A-Z' link and selecting 'poverty data' under "P." Additional tables presenting poverty information from the SIPP are also available on the Internet site.

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The Census Bureau welcomes the comments and advice of users of its data and reports. If you have any suggestions or comments, please send an e-mail inquiry to:

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